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Wohlfarth, T.D.

### ***published in***

European Journal of Public Health  
1998

### ***DOI (link to publisher)***

[10.1093/eurpub/8.2.183-a](https://doi.org/10.1093/eurpub/8.2.183-a)

### ***document version***

Publisher's PDF, also known as Version of record

### [Link to publication in VU Research Portal](#)

### ***citation for published version (APA)***

Wohlfarth, T. D. (1998). Explanations of socio-economic mortality differences: a reader's comment. *European Journal of Public Health*, 8(2), 183-183. <https://doi.org/10.1093/eurpub/8.2.183-a>

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# Letters

## Explanations of socioeconomic mortality differences: a reader's comment

Sir,

I read with interest the article by Blane, Bartley, and Smith<sup>1</sup> in the December 1997 issue of the journal. Following the Black Report,<sup>2</sup> this article, which is the fourth in a series, focuses on the fourth type of explanation for socioeconomic mortality differentials, namely material deprivations. Previous papers by the same authors have examined the evidence for the other three types of explanations, namely measurement artefact, social selection and behavioural factors. While the importance of these explanations should not be underestimated, I find it unfortunate that the Black Report<sup>2</sup> as well as the article by Blane, Bartley, and Smith<sup>1</sup> have neglected to take a more comprehensive view of socioeconomic health differences.

Specifically, three issues need to be dealt with in order to recognize the complexity of this phenomenon. The first is a recognition of social conditions (e.g. socioeconomic status) as 'fundamental causes' of disease.<sup>3,4</sup> According to this view, social conditions (e.g. socioeconomic status) are fundamental causes of disease since they involve access to resources that influence health through a variety of mechanisms. Hence, the association between socioeconomic status and health was maintained over many decades during which the most common causes of death as well as the specific risk factors associated with them have changed dramatically from mainly infectious to mainly chronic diseases. The robustness of this association over different eras indicates that the association cannot be attributed merely to specific causal pathways linking specific risk factors, which are associated with socioeconomic status, with specific diseases, but that rather a more general process underlies the association. Therefore, instead of focusing only on factors that are proximate to disease, the causal process should incorporate factors that are proximate to socioeconomic status. Indeed, the discrepancy Blane, Bartley, and Smith<sup>1</sup> found between the large effect of material conditions measured at the macro level (by observing mortality gradients between socioeconomic

groups) and the small effect of material conditions measured at the individual level could be due to the operation of fundamental causes.

The second issue involves the model of disease causation. The authors limited their attention to causal pathways which are biologically plausible. Surely, the final step in the causal pathway leading to disease and mortality is a biological one but, by focusing on biological processes, this approach runs the risk of neglecting the two other, no less important factors which are part of a biopsychosocial model and, moreover, it is not likely to recognize the dynamic interplay between these factors.

Finally, the authors did not recognize the fact that the hypothesized process underlying socioeconomic health differentials is dependent on the model adopted for conceptualizing and measuring socioeconomic inequality.<sup>5</sup> Hence, in a model which assumes extensive social mobility and, hence, focuses on those aspects of socioeconomic inequality which are more open to mobility (socioeconomic status), social selection is a plausible explanation of the relationship between socioeconomic inequality and health, while in a model which focuses on less mobile aspects (such as social class), this explanation is less likely.

In summary, a comprehensive approach to the processes underlying socioeconomic health differences will lead not only to a deeper understanding of this phenomenon but also to the planning of more efficient interventions aimed at reducing those differences.

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- 4 Evans RG. Introduction. In: Evans RG, Barer ML, Marmor TR, editors. *Why are some people healthy and others not?* New York: de Gruyter, 1994:3-26.
- 5 Wohlfarth T. Socioeconomic inequality and psychopathology: are socioeconomic status and social class interchangeable? *Soc Sci Med* 1997;45(3):399-410.

## Explanations of socioeconomic mortality differences: reply to a reader's comment

Three interesting issues are raised:

1 Does the stability of the mortality gradient (across time and across the transition from acute infectious mortality to chronic disease mortality) suggest an underlying process which is more general than the specific, biologically plausible, causal pathways that the paper emphasizes?

**Answer:** yes. This underlying process, however, is not one of the many variants of the psychosocial which have been proposed elsewhere, such as sense of coherence or low self-esteem consequent on an inferior position in the social hierarchy. The underlying process is the social structure which distributes power and resources in such a way that those at the bottom of the hierarchy receive the worst of everything that any particular stage of economic development can produce. This was the rationale behind the paper's choice of aetiological agents.

2 Does an emphasis on biological plausibility lead to neglect of the psychosocial components of the biopsychosocial model?

**Answer:** no. The aspects of the psychosocial which were of interest to the paper were those which may be biologically plausible. Great progress has been made recently in understanding the pathways by which perception can influence the immune and neuroendocrine systems. However this knowledge has yet to demonstrate that such physiological processes can be transformed into anatomical change and disease pathology. Without such evidence, the biological plausibility of psychosocial factors remains incomplete. The paper did include as materialist those psychosocial factors which are linked to the unequal distribution of power, such as autonomy and control within the workplace.

3 Does examining health inequities in terms of social class rather than socioeconomic status conceptually downplay the importance of social selection?

**Answer:** no. The distinction between class and status is an important one. Which is often ignored in health inequality research. However, measures which divide the population into classes, such as the Erikson-Goldthorpe schema do not show lower levels of mobility than measures of status such as the Hope-Goldthorpe scale.<sup>1</sup> Because of its

traditional use in epidemiology in the UK, much of our evidence was expressed in terms of the Registrar General's social classes. The Registrar General's classification indexes social status because it has been based on 'the general social standing of different occupations in the community'. In this sense, the paper did not ignore status. Nor is our general approach blind to the levels of social mobility which characterize contemporary Europe.<sup>2</sup> However, we believe that this social mobility narrows, rather than creates or widens, health inequalities.<sup>3</sup>

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## "Book reviews

**Boyle FM. Mothers bereaved by stillbirth, neonatal death or sudden infant death syndrome: patterns of distress and recovery. Aldershot, England, UK: Ashgate, 1997. 126 pp., £30.00. ISBN 1 85972 149 4**

This book is about bereavement following the death of a baby to stillbirth, neonatal death or sudden infant death syndrome (SIDS), a study based on interviews of 194 women and a control group of 203 mothers in Queensland, Australia. It is also a very good and critical review of previous research in the field. In this book, Boyles apparently has succeeded in overcoming most of the problems associated with earlier studies, in that a large sample and a proper control group were employed and a follow-up after almost three years was conducted. The longitudinal design and the combined quantitative and qualitative approach makes the outcome both interesting and convincing. The book not only deals with the psychological impact of the loss but also examines other aspects of life, such as the parental relationship, social functioning, subsequent

childbearing and the woman's health following the death of a baby.

In such a brief review, only a few of the key findings from the study can be listed.

— Women who had experienced the death of a baby to SIDS tended to have higher rates of distress, both initially and in the longer term.

— The death of a baby does not appear to have a major impact on the quality of the relationship between the bereaved parents.

— The negative consequences of having a new child have probably been over emphasized in the clinical literature, as the impact on the mental health from an early pregnancy appear to be minimal. On the other hand, having other children in the home seems to be a significant stress factor.

— Overall, sociodemographic factors were weakly associated with outcome patterns.

This small but comprehensive book is highly recommended reading for both researchers and practitioners.

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**Beaglehole R, Bonita R. Public Health at the Crossroads. Cambridge: Cambridge University Press, 1997. 243 pp. £17.95 (paperback). ISBN 0-521-58665-8.**

Those who read this book will end up having to assess many fundamental principles concerning public health, epidemiology, their interaction and how other scientific endeavours contribute to the theory and practice of public health. Unfortunately, many professionals who should potentially benefit from such enquiries may well have been put off by the rather polemic tone of the first chapters of this book. Not only is the tone of the book liable to put some readers off, the authors to some extent set themselves up as providing the final analysis whereby the reader will be able to see clearly the holistic way forward for public health of the twenty-first century, away from the reductionist dead end which many public health practitioners now supposedly find themselves. Fortunately, the authors debunk the term 'new public health' themselves.

Having set up these expectations, the authors then go down the fairly well-worn path of describing global health patterns in terms of national mortality

trends. One point they bring out is the paucity of contemporary information and the need to collect much better population and clinical surveillance data. The authors describe that, while the rhetoric from health care professionals concerning the need for good data is often abundant, in most countries neither private nor public organizations are keen to provide the resources to obtain such information. The authors' point that contemporary epidemiological and public health research needs to be placed within its proper social and economic context is also well taken, although this does need a framework which includes both individual and population dimensions.<sup>1</sup>

Another aspect lacking from many contemporary population analyses is the absence of an appropriate historical perspective. For specific enquiries this may be obtained by using the different epidemiological methods within their relevant research framework. Unfortunately the authors do not seem to recognize this and their description of epidemiological methods is rather confused and confusing for the less experienced. Yet they do provide an interesting historical overview of the development of public health and epidemiology. Reading the authors interpretation of the contagionism versus anticontagionism debate in the nineteenth century, one wonders whether the reductionist versus the holistic approach of public is a twentieth century variant of the same debate.

The descriptions of how public health has developed in different countries is interesting, though one is left feeling that one would like to read more about these.

The layout of the book and the various chapters is to be considered useful, in particular the 'key points boxes'. While the authors do want to reopen new public health vistas for us, unfortunately they do not quite deliver. On the one hand, they wish for the importance of public health to obtain more broader recognition among health care professionals, politicians and the general public, which may not sit comfortably with the advocacy role which the authors feel should be part of a public health practitioner's repertoire. Generally, new ideas need a period of time to be articulated before they become more broadly accepted and proponents of these ideas are often not immediately hailed as the new 'Messiah' whom they may well turn out to be. These tensions concerning the